

Courses	AQA A Level Design and Technology: Product Design AQA A Level Art & Design: Three dimensional Design AQA Design and Technology GCSE
Careers	Architect, product designer, civil/mechanical engineer, theatre/film set designer, carpenter/ manufacturing,
Skills	Problem solving, evaluation and reflection skills ICT literacy, collaboration, adaptability, self-management, project management, practical application. Materials and manufacturing knowledge.
Real World	Designing and adapting products to solve real life problems using design to improve the world around us.

Cycle 2
NEA completed.
Critical analysis and
evaluation.
National and
international
standards in product
design.
Exam techniques.
Maths skills for
written paper.

Cycle 3
Exam.
Protecting designs and intellectual
property
Enterprise and marketing in the
development of products

Cycle 1
NEA:substantial design &
make project.
Technical principles
Design and Make principles.

Year 13

Cycle 3
Digital design and manufacture (CAD)
Computer aided manufacture (CAM)
Design process iterative design.

Cycle 2
Performance
characteristics of
materials.
Enhancements of
materials.
Design styles and
movements.
Project management.
Technology and
cultural change
Responsible design
Design communication

Cycle 2
Design finalised.
Manufacturing
specification.
Review of core
practical skills and
materials
knowledge
Retrieval and
revision of all
content.
Exam preparation

**Revision and GCSE
Exams**

Cycle 1
NEA: Generating design ideas a
range sketches and modelling
both 2d and 3d.
CAD/communicate, iterations
model, test improve repeat.

Year 11

Year 12
Cycle 1
Materials and their
characteristics. Classification of
materials. Health and safety
Methods for investigation and
testing materials

Cycle 3
Paper & board material focus.
New and emerging technologies, smart and modern materials
Energy types, generation and storage.
Introduction of NEA contexts: Identify problem, find client
and complete profile, create Design Brief and Design
Specification.

Cycle 2
CAD CAM
Work of others: Design
movements and
famous Product
Designers
Communication of
design ideas
Virtual modelling
Material selection
Working within
constraints
Working with standard
components.

Cycle 3
Responsible design
6 R's and sustainability
Reprocessing materials
Scales of production
Teamwork.

Cycle 1
Food nutrition and health
Diet and life stages
Functions and sources of protein
in the diet
Cooking techniques

Year 9

Year 10
Cycle 1
Metal & timber materials focus.
Mechanisms. Design process.
Iterative design (mock NEA)
Ergonomics
CAD CAM
Machining with accuracy

Cycle 2
Polymers materials
focus. Stock form,
sources of materials,
industrial processes
and surface treatments
and finishes.

Cycle 2
Materials focus:
polymers, types,
stock forms and
environmental
impact
Health & safety
Product analysis
How paper is made,
sources of paper.

Cycle 3
Using a Design Brief and Design
Specification
Use of inspiration to create design ideas
Using hand tools and machines to shape,
join and finish polymers
Graphic design

Cycle 1
Knife skills, practical skills
and following a recipe
H & S, Eatwell guide, 4Cs
nutrient functions, healthy choices

Year 7

Cycle 3
Designing, modelling, testing
Materials focus: Paper and board.
Science link: Types of motion and
aerodynamics. Health and Safety
using scalpels and glue guns. Purpose
of modelling design ideas.

Cycle 2
Material focus:
timber, stock forms
and types.
Use of hand tools
and equipment to
waste and finish
timber.
Maths focus:
Measure & mark out.
Health & safety
The purpose of
wood joints and
joinery.

Year 8
Cycle 1
Sauces, food science,
Preparation and cooking
techniques; Eatwell guide
Functions of fat in the diet,
energy balance.

Year 6

- Investigate and analyse a range of existing products
- Evaluate their ideas and products against their own design criteria and consider the views of others to improve their work

Key Stage 3	Key Stage 4	Key Stage 5
<p>Identify, investigate and outline design possibilities to address needs and wants.</p> <p>Design and make prototypes that are fit for purpose.</p>	<p>Analyse and evaluate: design decisions and outcomes, including for prototypes made by themselves and others wider issues in design and technology.</p>	<p>Demonstrate and apply knowledge and understanding of: technical principles designing and making principles.</p>